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(71) Applicant (for all designated States except US): THE UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC. [US/US]; Boyd Graduate Studies Research Center, Athens, GA 30602-7411 (US).			
(71)(72) Applicant and Inventor: ALTMAN, Elliot [US/US]; 210 Great Oak Drive, Athens, GA 30605 (US).			
(74) Agent: SANDBERG, Victoria, A.; Muetting, Raasch & Gebhardt, P.A., P.O. Box 581415, Minneapolis, MN 55458-1415 (US).			
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(54) Title: STABILIZED BIOACTIVE PEPTIDES AND METHODS OF IDENTIFICATION, SYNTHESIS AND USE

(57) Abstract

An intracellular selection system allows concurrent screening for peptide bioactivity and stability. Randomized recombinant peptides are screened for bioactivity in a tightly regulated expression system, preferably derived from the wild-type *lac* operon. Bioactive peptides thus identified are inherently protease- and peptidase-resistant. Also provided are bioactive peptides stabilized by a stabilizing group at either the N-terminus, the C-terminus, or both. The stabilizing group can take the form of a small stable protein, such as the Rop protein, glutathione sulfotransferase, thioredoxin, maltose binding protein, or glutathione reductase, or one or more proline residues.

